

Key Concepts:

A circle is all of the points that are the same distance from the \_\_\_\_\_.

That distance is known as the \_\_\_\_\_.

A chord is a line segment inside a circle where each \_\_\_\_\_ is on the circle. The \_\_\_\_\_ is a special chord that also goes through the center.

A central angle is one that has its \_\_\_\_\_ at the center of the circle.

A central angle creates a \_\_\_\_\_ arc and a \_\_\_\_\_ arc. The minor arc is the part of the edge of the circle \_\_\_\_\_ the central angle (the smaller part) and the major arc is the part of the edge of the circle \_\_\_\_\_ the central angle (the larger part).

A semicircle is \_\_\_\_\_ a circle.

A tangent line touches the circle at exactly \_\_\_\_\_. It will be \_\_\_\_\_ to the radius that touches that point.

An inscribed angle has its vertex on the \_\_\_\_\_ of the circle.

The *degree measure* of a minor arc is the same as the \_\_\_\_\_ that contains it.

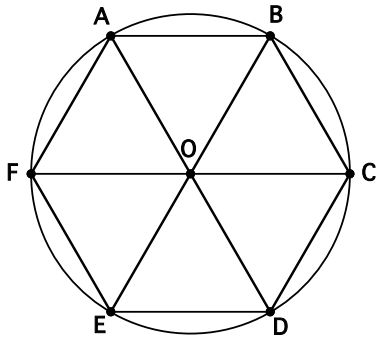
The *degree measure* of a major arc equals  $360 -$  the degree measure of its minor arc.

Use this formula to find the *length* of an arc: \_\_\_\_\_ where  $r$  is the radius and  $D$  is the degree measure of the arc.

The measure of an inscribed angle is \_\_\_\_\_ the measure of the arc it contains.

Other important information:

Example 1: The figure shows a regular hexagon inscribed in circle O. The radius is 6 cm.

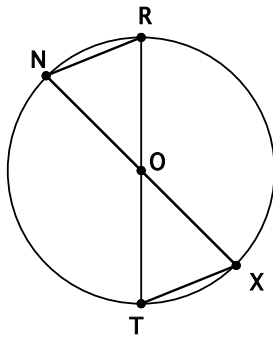


a. What is the measure of  $\widehat{CFD}$ ?

b. What is the length of  $\widehat{AC}$ ?

c. What is the length of  $\widehat{AEC}$ ?

Example 2: The diameter of circle O is 16 in. Triangles NOR and TOX are equilateral.



a. What is the measure of  $\widehat{RX}$ ?

b. What is the length of  $\widehat{RX}$ ?

c. What is the measure of  $\widehat{NT}$ ?